Claims

1. A coating composition comprising

- at least one cerium(IV) compound,
  either
- at least one compound A having at least one isocyanate-reactive group and at least one free-radically polymerizable unsaturated group and
- at least one isocyanato-functional compound B,
  or
- at least one compound C having at least one isocyanate group and at least one free-radically polymerizable unsaturated group and
- at least one compound D having at least one isocyanate-reactive group, and additionally
- if appropriate at least one photoinitiator,
- if appropriate at least one solvent,
- if appropriate at least one free-radically polymerizable monomer,
- if appropriate at least one polyfunctional polymerizable compound, and
- if appropriate further, typical coatings additives.

2. The coating composition of claim 1, wherein the cerium(IV) compound is selected from the group consisting of ammonium hexanitratocerate(IV) (cerium(IV) ammonium nitrate, $(NH_4)_2[Ce(NO_3)_6]$), sodium hexanitratocerate(IV) ($Na_2[Ce(NO_3)_6]$), potassium hexanitratocerate(IV) ($K_2[Ce(NO_3)_6]$), cerium(IV) ammonium sulfate ($Ce(NH_4)_2(NO_3)_6$), cerium(IV) hydroxide, cerium(IV) isopropoxide/isopropanol complex, cerium(IV) oxide (CeO_2), and cerium(IV) sulfate ($Ce(SO_4)_2$).

3. The coating composition of claim 1, wherein the cerium(IV) compound in the coating composition is obtained by oxidizing cerium compounds in a lower oxidation state.

4. The coating composition of claim 3, wherein cerium(III) compounds are used as cerium compounds in a lower oxidation state.

5. The coating composition of any one of the preceding claims, wherein the at least one compound A having at least one isocyanate-reactive group and at least one free-radically polymerizable unsaturated group is selected from the group consisting of 2-hydroxyethyl (meth)acrylate, 2- or 3-hydroxypropyl (meth)acrylate, 1,4-butanediol mono(meth)acrylate, neopentyl glycol mono(meth)acrylate, glycerol mono- and di(meth)acrylate, trimethylolpropane mono- and di(meth)acrylate, pentaerythritol mono-, di-, and tri(meth)acrylate, and 4-

hydroxybutyl vinyl ether, 2-aminoethyl (meth)acrylate, 2-aminopropyl (meth)acrylate, 3-aminopropyl (meth)acrylate, 4-aminobutyl (meth)acrylate, 6-aminohexyl (meth)acrylate, 2-thioethyl (meth)acrylate, 2-aminoethyl(meth)acrylamide, 2-aminopropyl(meth)acrylamide, 3-aminopropyl(meth)acrylamide, 2-hydroxyethyl(meth)acrylamide, 2-hydroxypropyl(meth)acrylamide or 3-hydroxypropyl(meth)acrylamide, and the reaction products of (meth)acrylic acid with bisphenol A diglycidyl ether, bisphenol F diglycidyl ether, 1,4-butanediol diglycidyl ether, 1,6-hexanediol diglycidyl ether, trimethylolpropane triglycidyl ether or pentaerythritol tetraglycidyl ether.

6. The coating composition of any one of the preceding claims, wherein said at least one isocyanoto-functional compound B is a diisocyanate having 4 to 20 carbon atoms.

7. The coating composition of claim 6, wherein said diisocyanate is an aliphatic or cycloaliphatic diisocyanate.

8. A method of coating substrates, which comprises coating a substrate with a coating composition of any one of the preceding claims.

9. A substrate coated with a coating composition of any one of claims 1 to 7.

10. The use of cerium(IV) compounds in dual-cure curing.